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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,121	11/14/2001	Ronald Hilton	AMDH-08156US0 DEL	4641
21603	7590	07/19/2005	EXAMINER	
DAVID E. LOVEJOY, REG. NO. 22,748 102 REED RANCH ROAD TIBURON, CA 94920-2025			SILVER, DAVID	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,121

Applicant(s)

HILTON, RONALD

Examiner

David Silver

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-7 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 4 contains the trademark/trade name "S/390". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a legacy computer architecture and, accordingly, the identification/description is indefinite.

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Claim Interpretation

- b. The Examiner interprets the term RISC in claim 6 to mean "any architecture other than the legacy architecture", as stated in specifications located on page 3, column 1, paragraph 2, last sentence.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Danny Ballard (US Patent 4,638,423).

c. As per claim 1, Ballard discloses a method for dynamic emulation of legacy instructions comprising:

- i. accessing said legacy instructions in legacy blocks (column: 2 lines: 59-61),
- ii. for each particular legacy instruction in a particular legacy block, translating the particular legacy instruction into one or more particular translated instructions for emulating the particular legacy instruction (column: 1 lines: 35-38),
- iii. organizing the particular translated instructions into one or more particular translated blocks (column: 1 lines: 39-43),

iv. linking the particular translated blocks into a particular linked group corresponding to said particular legacy instruction (column: 1 lines: 39-43 and 56-62, column: 2 lines: 56-63, column: 3 lines: 22-27).

It is inherent in Ballard's system that to have a working emulator there must be a linking of translated blocks into linked groups corresponding to legacy instructions. Such a task is performed by Ballard's mentioned "control means" for maintaining flow of instructions.

- d. As per claim 2, Ballard discloses a method of claim 1 wherein
- v. said linking step uses a link in each particular translated block to point to a location of the next particular translated block of the particular linked group (column: 1 lines: 59-61).

This claim is rejected under same reasoning as claim 1 above.

Additionally, the examiner wishes to point out that it is inherent that Ballard's "control means" have a means for continuing to the next instruction, hence would have a link/pointer referring to the next translated block to be executed.

- e. As per claim 3, Ballard discloses a method of claim 1 wherein
- vi. said particular translated instructions are stored in a cache and wherein (column: 2 lines: 56-58)
- vii. said particular translated instructions are purged from said cache only when all said particular translated instructions of

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particular translated blocks are also purged from said cache
(column: 2 lines: 56-63, and column 2 line 65 to column 3 line 2,
column: 3 lines: 22-27).

The examiner asserts that according the Ballard the blocks of code
would have been moved into memory (according to column 3 lines
22-27) when such an action would occur old blocks of code would
have been purged from memory.

- f. As per claim 4, Ballard discloses a method of claim 1 wherein
 - viii. said legacy instructions are for a legacy system having a legacy computer architecture (column: 1 lines: 23-26).
- g. As per claim 5, Ballard discloses a method of claim 1 wherein
 - ix. said legacy instructions are object code instructions compiled/assembled for a legacy architecture (column: 1 lines: 39-43).
- h. As per claim 6, Ballard discloses a method of claim 1 wherein
 - x. said translated instructions are for execution in a RISC architecture (column: 1 lines: 41-43).
- i. As per claim 7, Ballard discloses a method for dynamic emulation of legacy instructions, where the legacy instructions are compiled/assembled into object code form for a native architecture, where the legacy instructions are executed as guests in the host architecture, where the legacy instructions are translated to translated instructions in the host architecture and the translated instructions are executed in the

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host architecture concurrently with the translation of the legacy

instructions in the host architecture, comprising:

- xi. accessing said legacy instructions in legacy blocks of a host system operating with said host architecture (column: 1 lines: 446-49, column: 2 lines: 52-56),
- xii. for each particular legacy instruction in a particular legacy block,
 - (1) translating the particular legacy instruction into one or more particular translated instructions of the host system for emulating the particular legacy instruction as a guest in said host architecture (column: 1 lines: 35-38),
 - (2) organizing the particular translated instructions into one or more particular translated blocks (column: 1 lines: 39-43, column: 3 lines: 23-27),
 - (3) linking the particular translated blocks into a particular linked group corresponding to said particular legacy instruction (column: 1 lines: 39-43 and 56-62, column: 2 lines: 56-63, column: 3 lines: 22-27).

The examiner asserts that “when the processor attempts to execute an instruction” it is inherently accessing the said instruction.

Claims 1-7 are rejected.

Information Disclosure Statement

No IDS was submitted.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

j. Reference B and C contain references to virtual machines and emulation of computers on variations of computers architectures as well as various caching techniques.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on (571)272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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David Silver
Examiner
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JEAN R. HOMERE
PRIMARY EXAMINER